217/782-2113

"REVISED"
TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT[1]

PERMITTEE

Morton International, Inc.
Attn: Bruce Shabosky
5005 Barnard Mill Road
Ringwood, Illinois 60072-0238

Application No.: 96030084 I.D. No.: 111811AAB
Applicant's Designation: Date Received: March 7, 1996
Operation of: Adhesive and Chemical Specialties
Date Issued: September 29, 2000 Expiration Date[2]: September 29, 2005
Source Location: 5005 Barnard Mill Road, Ringwood, McHenry County
Responsible Official: Larry Schmid

This permit is hereby granted to the above-designated Permittee to OPERATE an adhesive and chemical specialties, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

Revision Date Received: April 3, 2001
Revision Date Issued: November 10, 2004
Purpose of Revision: Minor Modification

This minor modification corrects the description of the Liquid Dye Production as well as updates the baseline emissions and ATUs allotted.

This document only contains those portions of the entire CAAPP permit that have been revised as a result of this permitting action. If a conflict exists between this document and previous versions of the CAAPP permit, this document supercedes those terms and conditions of the permit for which the conflict exists. The previous permit issued September 29, 2000 is incorporated herein by reference.

Please attach a copy of this amendment and the following revised pages to the front of the most recently issued entire permit.

If you have any questions concerning this permit, please contact Kaushal Desai at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:KKD:psj

cc: Illinois EPA, FOS, Region 1
USEPA

[1] This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated there under, including 40 CFR 52.21 – federal PSD and 35 IAC Part 203 – Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

[2] Except as provided in Condition 8.7 of this permit.

TABLE OF CONTENTS

PAGE

10.0 ATTACHMENTS

1.0 SOURCE IDENTIFICATION

1.1 Source

Morton International, Inc.
5005 Barnard Mill Road
Ringwood, Illinois 60072
815/653-2411

I.D. No.: 111811AAB
Standard Industrial Classification: 2891, Chemical and Allied Products

1.2 Owner/Parent Company

Morton International, Inc.
100 North Riverside Plaza
Chicago, Illinois 60606-1560

1.3 Operator

Morton International, Inc.
5005 Barnard Mill Road
Ringwood, Illinois 60072-0238

Bruce Shabosky, Environmental Engineer
815/653-2411

1.4 General Source Description

The Morton International, Inc. is located at 5005 Barnard Mill Road in Ringwood, Illinois. This manufacturing source produces a multitude of products including latex, resins, plastics, adhesives, and ink components that are marketed to various industries. The source operates a number of chemical processes that are either batch or continuous in nature. The facility also operates combustion units for the production of steam and heat.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ACMA	Alternative Compliance Market Account
ATU	Allotment Trading Unit
BAT	Best Available Technology
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emissions Reduction Market System
ft^3	Cubic Feet
HAP	Hazardous Air Pollutant
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
ILCS	Illinois Compiled Statutes
Kg	Kilogram
kW	kilowatts
LAER	Lowest Achievable Emission Rate
lb	pound
M^3	Cubic Meter
MACT	Maximum Achievable Control Technology
Mg	Megagram
MW-hr	Megawatt-hour
mmBtu	Million British thermal units
NO_x	Nitrogen Oxides
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PM	Particulate Matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration
RMP	Risk Management Plan
SO_2	Sulfur Dioxide
T1	Title I-identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New –identifies Title I conditions that are being established in this permit

T1R	Title I Revised –identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Groundwater Stripper

Adcote Polyester Area

Ethylene Glycol Tank (TSS-104)
Ethylene Glycol Day Tank (TSS-160)

Polyurethane Area

TDI Day Tank (K-108)
MDI Day Tank (TSS-121)
Storage Tank (TSS-248)
TDI Storage Tank (TSS-103)
TDI Storage Tank (TSS-125)
Storage Tank (TSS-126)
Storage Tank (TSS-127)

Serfene Area

Transfer to Drums, Totes
Screeners

Latex Area

Transfer to Drums, Totes
Transfer through Screeners
Water Based Material Storage

Tank Farm Area

Storage Tanks (TS-47, TS-127B, TS-260, TSS-70, TS-85, TSS-50, TSS-51, TS-146, TSS-236A)

Morez Solution Building 27

Holding Tank (TSS-269)
TSS-269 Transfer to Containers

Morez Solution Building 4

Storage Tanks (TSS-94, TSS-102)

Morthane TPU Line III

Transfer to Shipping Containers

Latex/Serfene Area

Side Stream Mix Cans
Intermediate Tanks

TPU Batch Process

Storage Tanks (TSS-377)

Development Areas

Storage Tanks
(TSS-115, 116, 326, 327, 328, 329)

Grafted Resin Area

Product Changeover
Waste Drumming
Pellet Transfer: Truck/Silo (DC-55)
Pellet Transfer: Silo/Feeder (CN-52)
Pellet Transfer: Dryer/Classifier (CN-48)
Pellet Transfer: Classifier MI 307 (CN-43/DC-49)
Pellet Transfer: MI 307/Containers
Pellet Transfer: Containers/Wash Vessel K-166 (CN-47)

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

Adcote Polyester Production

Tank TSS-243
Day Tank TSS-123

Grafted Resins

Polyethylene Tank/DC55 (TA-16)

Polyurethane Production

Glycol Tanks TS (162, 161, 167, 168) TSS (169, 170)

Latex

Gram Scale S and N
Reactor K (132, 133, 88, 65, 105)
Heat Exchangers HX (70, 99, 37, 34)
Tank (aqueous NH_3) TSS-152
Processing in K133/HX70
Processing in K132/HX99

Tank TS-155
Tank (Phosphoric)

Morez Line II

Day Tanks TFG (37, 39, 198, 40)

Morez Line III

Bagging Station PE-4

Morthane TPU Line I

Polyol Blending Tanks K (150, 101, 126)
Blender MI 209
Extruder/Pelletizer EX-1
Pellet Blender FD-31
Gala Dryer DY-52
Steam Oven DY-54
Electric Oven HE-165
Storage Tank TSS-228
Curing Vessel/Blender MI-269
Material Handling Filter CN (39, 45)
Bagging Station
DC-45
DC-48

Morthane TPU Line III

Product Blender/Curing Vessel MI (319, 350)
Talcing System BE-33
Material Handling Filter for MI-319 (CN-46)
H2O Slurry Tank
Spin Dryer DY-66
Fluid Bed/Pellet Dryer CF-2
Product Cooling Units
Material Handling Filter CN-49
FD-35

Tank Farm

Storage Tanks TS (127A, 147, 61, 45, 73, 236B)
TSS (250), TA-8, and TFG (58, 59)

Morthane Polyester

Tanks TSS (272, 314, 315, 317, 323, 273, 270, 274, 275, 276)

Miscellaneous Sources

Tanks TSS-173, and TFG-62
Solvent Shot Tank TS-282
Product Part Cleaner Parts-INC-7

TPU Batch Process

Storage Tanks TSS (376, 378, 368, 314)
Mixing Vessel K-180
Granulator GR-52
Blender MI-404
Dust Collector DC-57

Polymer Wash Water Reduction

TS-238

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Extruders used for the extrusion of metals, minerals, plastics, rubber, or wood, excluding extruders used in the manufacture of polymers, provided that volatile organic materials or class I or II substances subject to the requirements of Title VI of the CAA are not used as foaming agents or release agents or were not used as foaming agents in the case of extruders processing scrap material [35 IAC 201.210(a)(5)].

Equipment used for filling drums, pails, or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(8)].

Equipment used for the mixing and blending of materials at ambient temperature to make water based adhesives, provided each material mixed or blended contains less than 5% organic solvent by weight [35 IAC 201.210(a)(9)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)] and [35 IAC 201.210(a)(16)].

Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials, provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable. Compliance with applicable requirements shall be addressed by the routine operating information and records that are otherwise maintained by the source, which the Permittee shall make available for inspection by the Illinois EPA upon request.

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690. Units in compliance with 35 IAC 218.302 or 218.303 are exempt from the provisions of 35 IAC 218.301.

3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Units	Date Constructed	Control Equipment[1]
Boiler #6	1976	
Boiler #7	1995	
Morez Solution in Building 4	1988	
Morez Solution in Building 27	1989	
Serfene Process	1972	
Adcote Polyester Production	1974	
Grafted Resins and Resins Washing	1989	
Liquid Dye Production	1987	
Latex	1973	
Latex K154 Process	1989	
Morez Line I	1985	
Morez Line II	1986	
Morez Line III	1989	
Morthane Polyester	1989	
Polyurethane Production	1974	
MT/MS Production	1972	
Monomer for Reaction	1976	
Development Building 28	1971	
Development Building 44	1983	
Development Centrifuge CE-7	1971	
Morthane TPU Line I	1984	
Morthane TPU Line III	1992	
Morthane TPU Batch Process	1997	
PSA Production	1974	
Polymer Wash Water Reduction Unit	1981	
Solvent Recovery System	1993	
Storage Tanks	1988	
Tank Farm	NA	

Note:[1] For the control equipment refer to Section 7 for each emission unit

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of volatile organic material (VOM) and hazardous air pollutants (HAPs) emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

c. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2,000 ppm [35 IAC 214.301].

5.2.3 The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 a. This stationary source, as defined in 40 CFR Section 68.3, is subject to 40 CFR Part 68, the Accidental Release Prevention regulations [40 CFR 68.215(a)(1)].

b. The owner or operator of a stationary source shall revise and update the RMP submitted, as specified in 40 CFR 68.190.

5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.3 Non-Applicability of Regulations of Concern

None, except as identified on a unit-specific basis in Section 7.

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	226.91
Sulfur Dioxide (SO_2)	39.32
Particulate Matter (PM)	39.44
Nitrogen Oxides (NO_x)	33.74
HAP, not included in VOM or PM	----
TOTAL	339.41

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Retention and Availability of Records

a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating VARIABLE Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping of Condition 5.6, and the recordkeeping Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182I of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set in the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source shall have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources' transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the "Alternative Compliance Market Account" (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

6.2 Applicability

This source is considered a "participating source" for purposes of the ERMS, 35 IAC Part 205.

6.3 Obligation to Hold Allotment Trading Units (ATUs)

a. Pursuant to 35 IAC 205.150I(1) and 35 IAC 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than the ATU equivalent of its VOM emissions during the preceding seasonal allotment period (May 1 – September 30), not including VOM emissions from the following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.5.

i. VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;

ii. Excess VOM emissions associated with startup, malfunction, or breakdown of an emission unit as authorized in Section 7.0 of this permit, in accordance with 35 IAC 205.225;

iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3);

iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and

v. VOM emissions from certain new and modified emission units as addressed by Condition 6.8(b), if applicable, in accordance with 35 IAC 205.320(f).

b. Notwithstanding the above condition, in accordance with 35 IAC 205.150I(2), if a source commences operation of a major modification, pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its seasonal VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

6.4 Market Transactions

a. The source shall apply to the Illinois EPA for and obtain authorization for a Transaction Account prior to conducting any market transactions, as specified at 35 IAC 205.610(a).

b. he Permittee shall promptly submit to the Illinois EPA any revisions to the information submitted for its Transaction Account, pursuant to 35 IAC 205.610(b).

c. The source shall have at least one account officer designated for its Transaction Account, pursuant to 35 IAC 205.620(a).

d. Any transfer of ATUs to or from the source from another source or general participant must be authorized by a qualified Account Officer designated by the source and approved by the Illinois EPA, in accordance with 35 IAC 205.620, and the transfer must be submitted to the Illinois EPA for entry into the Transaction Account database.

6.5 Emissions Excursion Compensation

Pursuant to 35 IAC 205.720, if the source fails to hold ATUs in accordance with Condition 6.3, it shall provide emissions excursion compensation in accordance with the following:

a. Upon receipt of an Excursion Compensation Notice issued by the Illinois EPA, the source shall purchase ATUs from the ACMA in the amount specified by the notice, as follows:

i. The purchase of ATUs shall be in an amount equivalent to 1.2 times the emissions excursion; or

ii. If the source had an emissions excursion for the seasonal allotment period immediately before the period for the present emissions excursion, the source shall purchase ATUs in an amount equivalent to 1.5 times the emissions excursion.

b. If requested in accordance with paragraph I below or in the event that the ACMA balance is not adequate to cover the total emissions excursion amount, the Illinois EPA will deduct ATUs equivalent to the specified amount or any remaining portion thereof from the ATUs to be issued to the source for the next seasonal allotment period.

c. Pursuant to 35 IAC 205.720I, within 15 days after receipt of an Excursion Compensation Notice, the owner or operator may request that ATUs equivalent to the amount specified be deducted from the source's next seasonal allotment by the Illinois EPA, rather than purchased from the ACMA.

6.6 Quantification of Seasonal VOM Emissions

a. The methods and procedures specified in Sections 5 and 7 of this permit for determining VOM emissions and compliance with VOM emission limitations shall be used for determining seasonal VOM emissions for purposes of the ERMS, with the following exceptions [35 IAC 205.315(b)]:

No exceptions

b. The Permittee shall report emergency conditions at the source to the Illinois EPA, in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.750(a), and shall be submitted in accordance with the following:

i. An initial emergency conditions report within two days after the time when such excess emissions occurred due to the emergency; and

ii. A final emergency conditions report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

6.7 Annual Account Reporting

a. For each year in which the source is operational, the Permittee shall submit, as a component of its Annual Emissions Report, seasonal VOM emissions information to the Illinois EPA for the seasonal allotment period. This report shall include the following information [35 IAC 205.300]:

i. Actual seasonal emissions of VOM from the source;

ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;

iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in 35 IAC 205.337;

iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the associated emergency conditions report that has been approved by the Illinois EPA;

v. If a source's baseline emissions have been adjusted due to a Variance, Consent Order, or CAAPP permit Compliance Schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and

vi. If a source is operating a new or modified emission unit for which three years of operational data is not

yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.

b. This report shall be submitted by November 30 of each year, for the preceding seasonal allotment period.

6.8 Allotment of ATUs to the Source

a. i. The allotment of ATUs to this source is 464 ATUs per seasonal allotment period.

ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 52.55 tons per season.

A. This determination includes adjustment to actual emissions to account for voluntary over-compliance at the source, e.g., Morez Line III_, pursuant to 35 IAC 205.320(d), as further addressed in Section 7 of this permit.

iii. The source's allotment reflects 88% of the baseline emissions (12% reduction), except for the VOM emissions from specific emission units excluded from such reduction, pursuant to 35 IAC 205.405, including units complying with MACT or using BAT, as identified in Condition 6.11 of this permit.

iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period during issuance and, if not retired in this season, the next seasonal allotment period.

v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period during the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.

6.9 Recordkeeping for ERMS

The Permittee shall maintain copies of the following documents as its Compliance Master File for purposes of the ERMS [35 IAC 205.700(a)]:

a. Seasonal component of the Annual Emissions Report;

b. Information on actual VOM emissions, as specified in detail in Sections 5 and 7 of this permit and Condition 6.6(a); and

c. Any transfer agreements for the purchase or sale of ATUs and other documentation associated with the transfer of ATUs.

6.10 Federal Enforceability

Section 6 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

6.11 Exclusions from Further Reductions

a. VOM emissions from the following emission units shall be excluded from the VOM emissions reductions requirements specified in 35 IAC 205.400I and (e) as long as such emission units continue to satisfy the following [35 IAC 205.405(a)]:

i. Emission units that comply with any NESHAP or MACT standard promulgated pursuant to the CAA;

ii. Direct combustion emission units designed and used for comfort heating purposes, fuel combustion emission units, and internal combustion engines; and

iii. An emission unit for which a LAER demonstration has been approved by the Illinois EPA on or after November 15, 1990.

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because they meet the criteria as indicated above [35 IAC 205.405(a) and (c)]:

Boiler No.6, Boiler No.7, and Oil Heater.

b. VOM emissions from emission units using BAT for controlling VOM emissions shall not be subject to the VOM emissions reductions requirement specified in 35 IAC 205.400I or (e) as long as such emission unit continues to use such BAT [35 IAC 205.405(b)].

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because these emission units use BAT for controlling VOM emissions as indicated above [35 IAC 205.405(b) and (c)]:

None

7.0 UNIT SPECIFIC CONDITIONS

7.1 Group 1: Boilers

7.1.1 Description

Natural gas fired boilers are used to produce steam for processes and building heat. The boilers are also able to fire distillate fuel oil (#2) as a back up fuel. Boiler # 7 is a new boiler constructed 1995.

7.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description	Emission Control Equipment
Group 1	Boiler No. 7	Natural Gas-Fired Boiler (Distillate Oil Back), Maximum Heat Input Capacity: Natural Gas – 50.321 mmBtu/hr Distillate Oil – 48.73 mmBtu/hr	Low NO_x Burner
	Boiler No. 6	Natural Gas-Fired Boiler (Distillate Oil Backup). Maximum Heat Input Capacity: Natural Gas – 30.90 mmBtu/hr Distillate Oil – 29.91 mmBtu/hr	None
	Oil Heater OH	Natural Gas-Fired Oil Heater 8.4 mmBtu/Hr Firing Rate	None

7.1.3 Applicable Provisions and Regulations

a. i. An "affected boiler" for the purpose of these unit specific conditions are the steam generating unit that is fired with natural gas (with distillate fuel backup), with a maximum heat input capacity of 100 mmBtu/hr or less, but greater than or equal to 10 mmBtu/hr. As of the "date issued" as shown page 1 of this permit, the affected boilers are identified in Condition 7.1.2.

ii. Boiler #7 is subject to the USEPA's Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating

Units, 40 CFR 60 Subpart Dc because it was constructed or modified after June 9, 1989.

b. The emissions of particulate matter (PM) into the atmosphere in any one-hour period for each affected boiler shall not exceed 0.15 kg/MW-hr (0.10 lb/mmBtu) of actual heat input when using liquid fuel exclusively [35 IAC 212.206].

c. The emission of carbon monoxide (CO) into the atmosphere from each affected boiler shall not exceed 200 ppm, corrected to 50 percent excess air. [35 IAC 216.121]

d. The emission of sulfur dioxide (SO_2) into the atmosphere in any one hour period from each affected boiler from burning liquid fuel shall not exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input from distillate fuel oil (0.3 lb/mmBtu) [35 IAC 214.161(b)]. Demonstration of compliance with the fuel sulfur content restrictions in condition 7.1.5.c also demonstrates compliance with condition 7.1.3.d.

e. Pursuant to the New Source Performance Standard, the emission of sulfur dioxide (SO_2) into the atmosphere from any one hour period from affected boiler #7 burning liquid fuel shall not exceed 0.77 kg of sulfur dioxide per MW-hr of actual heat input (0.5 lb/mmBtu); as an alternative the Permittee shall not combust oil in affected boilers that contains greater than 0.5 weight percent sulfur. All limits shall be based on a 30-day rolling average. [40 CFR 60.42c(d) and (g)]

f. Pursuant to the New Source Performance Standard, the emission of gases into the atmosphere from the affected boiler #7, except during periods of startup, malfunction and breakdown, shall not exhibit an opacity greater than 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43cI]

g. Each affected boiler is also subject to the opacity limits identified in Condition 5.2.2(b).

7.1.4 Non-Applicability of Regulations of Concern

a. Each affected boiler is not subject to 35 IAC 217.141, because the actual heat input of the affected boiler is less than 73.2 MW (250 mmBtu/hr).

b. Pursuant to 35 IAC 218.303, each affected boiler, i.e., fuel combustion emission unit, is not subject to 35 IAC 218.301, Use of Organic Material.

c. There are no applicable requirements for particulate matter or sulfur dioxide for affected boilers firing natural gas.

d. This permit is issued based on affected boiler #6 not being subject to the NSPS, 40 CFR 60 Subpart Dc, because it was constructed prior to June 9, 1989 and has not been constructed, modified or reconstructed after this date.

7.1.5 Operational and Production Limits and Work Practices

a. Each affected boiler shall only be fired by natural gas or distillate fuel oil as the fuels.

b. The Permittee shall follow good operating practices for firing of oil, including periodic inspection of oil burners and prompt repair of defects.

c. The Permittee shall not use distillate fuel oil (Grade No 2 fuels) in the affected boilers with a sulfur content greater than the larger of the following two values:

i. 0.30 weight percent, or

ii. The Wt percent given by the formula: Maximum Weight percent sulfur = (0.000015) x (Gross heating value of oil, Btu/lb).

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide limitations in Condition 5.5.1, the affected boilers are subject to the following:

a. Emissions of NO_x and SO_2 from the affected Boiler #7 shall not exceed 8.53 and 2.47 ton/month, and 8.53 and 2.67 ton/yr, respectively. These limits are being established in this permit [T1R].

b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

7.1.7 Testing Requirements

Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7)(d) of the Act, measurement of opacity shall be conducted in accordance with Method 9, 40 CFR part 60, Appendix A, and 35 IAC 212.109, so as to demonstrate compliance with the emission limits in Condition 7.1.3(f) and (g). The Permittee shall keep

records of any such observations and promptly report the result to the Illinois EPA within 30 days.

7.1.8 Monitoring Requirements

None

7.1.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items to demonstrate compliance with Conditions 5.5.1, 5.5.3 and 7.1.5 pursuant to Section 39.5(7)(b) of the Act:

a. Record addressing use of good operating practices for burning oil including:

i. Record of periodic inspection of the oil burners with date, individual performing the inspection, nature of inspection, and magnitude of stack opacity; and

ii. Records for prompt repair of defects, with identification and description of defect, date identified, date repaired, and nature of repair.

b. For affected boilers,

i. Total natural gas usage for affected Boiler #7 (ft^3/day); [40 CFR 60.48c(g)]

ii. Total distillate fuel usage for affected boiler # 7 (gal/day); [40 CFR 60.48c(g)]

iii. The maximum sulfur content (in Wt.%) for each shipment of distillate fuel oil used in the affected boilers; and

iv. Fuel oil supplier certification, including

A. The name of the oil supplier [40 CFR 60.48c(f)(1)(i)]; and

B. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil found at 40 CFR 60.41c. [40 CFR 60.48c(f)(1)(ii)]

c. Annual aggregate NO_x, PM, SO_2, and VOM emissions from each affected boiler, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable control and operating requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Any such notification shall include a description of the incident, the probable cause, and the corrective action or preventative measure taken:

a. Notification within 60 days of operation of an affected boiler that may not have been compliance with the opacity limitations in Condition 5.2.2(b), with a copy of such record for each incident.

b. If the sulfur content of a shipment of distillate fuel oil exceeds the limit, the Permittee shall submit this notification within 10 days after receipt of such shipment and the notification shall also include the amount of the shipment and its sulfur content.

c. The Permittee shall submit a quarterly report, which shall include, in addition to the fuel supplier certification required in Condition 7.1.9(a)(iv), a certified statement signed by the Permittee that the records of fuel supplier certifications submitted represent all of the fuel consumed during the quarter. [40 CFR 60.48c(e)(11)]

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.12 Compliance Procedures

a. Compliance provisions addressing Condition 7.1.3(b) and (c) are not set by this permit as compliance is assumed to be achieved by the work-practices inherent in operation of the affected boilers.

b. Compliance with Condition 7.1.3(d) and (e), shall be based on the recordkeeping requirements of condition 7.1.9 and the following formula:

SO_2 Emissions (lb/mmBtu) = (2 SO_2/S) x (weight percent sulfur in the fuel)/(gross heating value of oil, mmBtu/lb).

c. For purpose of determining compliance with Condition 5.5.1, emission from affected boilers shall be determined from the fuel usage record required by Condition 7.1.9 and the emission factors and formulas below:

i. Emissions from burning natural gas shall be determined with the following emission factors:

Pollutant	Emission Factor For Boiler 06 (lb/10^6 Btu)	Emission Factor For Boiler 07 (lb/10^6 Btu)
NO_x	0.13	0.036
SO_2	0.001	0.001
PM	0.01	0.01
VOM	0.016	0.016

These emission factors based on manufacturer's guaranteed emission data for natural gas fired boilers.

Boiler Emissions (lb) = natural gas consumed multiplied by the appropriate emission factor.

ii. Emissions from burning distillate fuel oil shall be determined with the following emission factors:

Pollutant	Emission Factor For Boiler 06 (lb/10^6 Btu)	Emission Factor For Boiler 07 (lb/10^6 Btu)
NO_x	0.23	0.11
SO_2	0.30	0.30
PM	0.022	0.022
VOM	0.025	0.025

These emission factors based on manufacturer's guaranteed emission data for distillate fuel oil fired boilers.

Boiler Emissions (lb) = distillate fuel oil consumed multiplied by the appropriate emission factor.

iii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.1.12(i) and (ii) for all affected boilers.

7.2 Group 2: Morez Solution in Building 4
Morez Solution in Building 27
Serfene Process
Adcote Polyester Production
Grafted Resins and Grafted Resins Washing
Liquid Dye Production
Latex and Latex K154 Process
Morez Line I, Morez Line II, and Morez Line III
Morthane Polyester
Polyurethane Production
MT/MS Production
Monomer for Reaction
Development Building 28,44, and Development Centrifuge CE-7
Morthane TPU Line I Morthane TPU Line III
Morthane TPU Batch Process
PSA Production

7.2.1 Description

Morez Solution in Building 4
Morez Solution in Building 27

This Process emission unit mixes resins, ammonia, solvents, additives, and water to form a solution. This operation is conducted in batch mode.

Serfene Process

This process emission unit uses monomers, surfactants, solvents, emulsifiers, catalysts, preservatives, water, acids and bases, buffers, and miscellaneous additives to manufacture water based emulsions. This operation is conducted in batch mode.

Adcote Polyester Production

This process emission unit uses glycols, diols, triols, polyol, acids, solvents, catalysts, water, and miscellaneous additives to manufacture polyester materials. This operation is conducted in batch mode.

Grafted Resins and Grafted Resins Washing

This process emission unit uses polyolefins, solvents, organic anhydrides, catalysts, water, and miscellaneous additives to manufacture polyolefin-based barrier laminates and adhesives. This operation operates in both a continuous and batch mode.

Liquid Dye Production

This process emission unit produces dyes, resins, adhesives, and coating materials in small volumes for production and developmental purposes.

Latex and Latex 154

This process emission unit uses monomers, solvents, surfactants, emulsifiers, catalysts, preservatives, water, acids and bases, buffers, and miscellaneous additive to manufacture water based emulsions, solutions, and dispersions. This operation is conducted in batch mode.

Morez Line I, Morez Line II ,and Morez Line III

This process emission units reacts monomers, solvents, acids, initiators, and miscellaneous additives to manufacture resins. This operation is conducted in a continuous mode.

Morthane Polyester

This process emission unit uses diols, triols, polyols, acids and bases, catalysts, water, and miscellaneous additives to manufacture polyester materials and urethane intermediate materials. This operation is conducted in batch mode.

Polyurethane Production

This process emission unit uses polyethers, polyesters, isocyanates, solvents, catalysts, stabilizers, water, and miscellaneous additives to manufacture polyurethane materials. This operation is conducted in batch mode.

MT/MS Production

This process emission unit reacts methyl chloride and ammonium thiocyanate to produce methyl thiocyanate (MT). The MT is dried to remove water and is further processed to yield methyl isothiocyanate (MS). Various compounds and petroleum products are blended with MS to produce a product with varying properties. This operation is conducted through a combination of batch and continuous processing.

Monomer for Reaction

The system accumulates unreacted monomer streams and reacts them in a batch operation to form a waterbased latex polymer. The polymer is directed to the wash water system.

Development Building 28 and 44 and development Centrifuge CE-7

This process emission unit uses a variety of organic and inorganic materials to produce small volumes of various production and developmental products.

Morthane TPU I and III

This process emission units use polyethers, polyesters, glycols, polyols, solvents, isocyanates, catalysts, urethane intermediates, waxes, water and miscellaneous additives to manufacture a variety of thermoplastic urethane type resins. These operations are conducted in a semi-continuous batch mode. These units are operated by Huntsman and Morton.

Morthane TPU Batch Process

This process emission unit uses polyethers, polyesters, glycols, polyols, solvents, isocyanates, catalysts, urethane intermediates, waxes, water, and miscellaneous additives to manufacture a variety of thermoplastic urethane type resins. This operation is conducted in batch mode. This unit is operated by Huntsman and Morton.

PSA Production

This process emission unit uses monomers, solvents, initiators, cross linkers, polyethers, water, and miscellaneous additives to manufacture adhesives. This operation is conducted in batch mode.

List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Emission Control Equipment
Morez Solution in Building 4	Mixing Tank (TSS-249)	Scrubber (AB-36) Carbon Adsorber(AD-11)
Morez Solution in Building 27	Morez Solution Vessel (TSS-268)	Scrubber (AB-38)

Emission Unit	Equipment	Emission Control Equipment
Serfene Process	Monomer Blend Tanks K-103,K-102, K-124,K-176,TSS181	Carbon Adsorber AD-9
	Stripping K-134,K-135	Carbon Adsorber AD-9
	Heat Exchangers HX-78,HX-77,HX-76	None

Emission Unit	Description	Emission Control Equipment
	Weight Tank for Serfene Stripping	Carbon Adsorber AD-9
	Reactor K-129	Carbon Adsorber AD-9

Emission Unit	Description	Emission Control Equipment
	Heat Exchanger HX-67	None
	Reactor K-174	Carbon Adsorber AD-9 and AD-11
	Heat Exchangers HX-244, HX-245	Carbon Adsorber AD-9
	Reactor K-170	Carbon Adsorber AD-9

Emission Unit	Description	Emission Control Equipment
	Reactor K-104	Carbon Adsorber AD-9
	Stripper K-99	Carbon Adsorber AD-9
	Heat Exchanger HX-63	None
	Stripped Product Receiving Tank	None
	Reactor K-127	Carbon Adsorber AD-9 and AD-11
	Heat Exchangers HX-134, HX-135	Carbon Adsorber AD-9
	Reactor K-153	Carbon Adsorber AD-9
	Heat Exchangers HX-60,HX-61	None
	Reactor K-175	Carbon Adsorber AD-9
	Heat Exchangers HX-195,HX-196	Carbon Adsorber AD-9
	Vapor Bubbling Units	Carbon Adsorber AD-9
	Heat Exchanger (Reflux for K104)	Carbon Adsorber AD-9
	Heat Exchanger (Reflux for K170)	Carbon Adsorber AD-9

Emission Unit	Description	Emission Control Equipment
Adcote Polyester Production	Polyester Reactor (2000 Gal)(K-178)	INC-4
	Shot Tank for K-178(TSS-140)	INC-4
	Drop Tank For K-178 (K-179)	INC-4
	Polyester Reactor (3000 Gal) (K-151)	INC-4

Emission Unit	Description	Emission Control Equipment
	Shot Tank (TSS-209)	INC-4
	Polyester Reactor (1800 Gal) (K-157)	INC-4
	Shot Tank For K-157(TSS-232)	INC-4
	Drop Tank (K-158)	INC-4
	Receiver (320 Gal) (TSS-233)	INC-4
	Receiver (200 Gal) (TSS-234)	INC-4

Emission Unit	Description	Emission Control Equipment
	Product Drumming	INC-4
	Receiver (TSS-302)	INC-4

Emission Unit	Description	Emission Control Equipment
Grafted Resins Production	Solid Material Hopper/Feeder (FD-38)	CN-52
	Material Handling; Dust Collector for MI-307	CN-43/DC-49
	Extruder (EX-4)	INC-5
	Pelletizer (PEL-3)	INC-5
	Pellet Dryer	AB-40
	Blender (MI-307)	CN-43/DC-49
	Local Ventilation Sources	AB-40

Emission Unit	Description	Emission Control Equipment
Grafted Resin Washing Production	Wash Vessel(K-166)	INC-5
	Solvent Reboiler(K-167)	INC-5
	Dryer (MI-323)	INC-5
	Separator (FI-241)	None
	Knockout Tank (TSS-292)	IN-5
	Ethyl Acetate Storage Tank (TSS-293)	INC-5

Emission Unit	Description	Emission Control Equipment
	Water-Cooled Heat Exchanger (HX-211)	INC-5
	Water-Cooled Condenser (HX-212)	INC-5
	Water-Cooled Heat Exchanger (HX-213)	INC-5

Emission Unit	Equipment
Latex	Monomer Blend Tank (K-21)
	Monomer Blend Tank (K-8)
	Monomer Blend Tank (K-83)
	Monomer Blend Tank (K-82)
	Monomer Blend Tank (TSS304)
	Monomer Blend Tank (K-57)
	Monomer Blend Tank (K-84)
	Monomer Blend Tank (TSS194)
	Carbon Regenerating Tank 1 (AD9-1)
	Carbon Regenerating Tank 2 (AD9-2)
	Heat Exchanger for Adcote (HX-117)
	Heat Exchanger for Adcote (HX-194)
	Column Filter (Total of 4)-Fixed
	Column Filter (Total of 4)-Portable
	Heat Exchanger (HX-87)
	Reactor (K-110)
	Heat Exchanger (HX-119)
	Reactor (K-168)
	Heat Exchanger (HX-29)
	Reactor (K-78)
	Reactors (K-100,K-171,K107)
	Two Heat Exchangers
	Carbon Adsorber

Emission Unit	Equipment
Latex K154 Process	Reactor (K-154)
	Heat Exchanger for K-154(HX-165)
	Cooling/Holding Tank for K-154 (K-155)
	Filter Press(FP-26)
	Column Filter (FI-159)
	Monomer Blend Tank(TSS215)
	Monomer Blend Tank(TSS216)
	Carbon Adsorber

Emission Unit	Equipment
Morez Line I*	Reactor (R-1)
	Monomer Tank (TFG-33)
	Monomer Tank (TFG-60)
	Solvent Tank (TFG-34)
*Tanks may be	Catalyst Tank (TFG-53)
used in Morez	Water Tank (TFG-30)
Line II	Acid Tank (TFG-31)
Morez Line II	Reactor for Line #2 (R-2)
	Cooling Belt (CN-37)
	Condenser (HX-154)
	Recycle Still (SI-21)
	Dust Collector (DC-51)
	Dust Collector (DC-44)
	Day Tank (TFG-42)
	Day Tank (TFG-38)
	Vac Tank (TSS240)
	Dust Collector (DC-42)
	Bagging Station (PE-1)
	Waste Drums for Reactor
	Fume Burner (INC-4)
	Recycle Hold Tank (TSS321)
	Devolatizer (EV-6)
	Heat Exchanger (HX-154/220)
Morez Line III	Dust Collector (DC-50)
	Feed Tank (TSS-382)
	Cooling Belt (CN-41)
	Evaporator (EV-9)
	Condenser (HX-182)
	Solvent Recycle Tank (TSS299)
	Waste Drums
	Recycle Still (SI24)
	Back-up Steam Jet
	Day Tank (TSS259)
	Day Tank (TSS263)
	Reactor (R-3)
	Devolatizer (EV-9)
	Fume Burner (INC-5)
	Heat Exchanger (HX-210)

Emission Unit	Description	Emission Control Equipment
Morthane Polyester	Polyester Reactor (K-164)	INC-5,CN-50
	Distillation Column (part of K-164)(SI-18)	INC-5
	Vapor Condenser (HX-183)	INC-5

Emission Unit	Description	Emission Control Equipment
	Venturi Scrubber (AB-37)	None
	Knockout Tank (TSS-278)	INC-5
	Separator Tank (TSS-279)	INC-5
	Polyester Reactor with Distillation Column (K-173)	INC-5,CN-49
	Distillation Column (part of K-173)(SI-25)	INC-5
	Vapor Condenser (HX-230)	INC-5
	Adipic Acid Filter for K173 (CN-49)	None
	Adipic Acid Filter for K173 (CN-50)	None
	Vent Filter on Adipic Acid Storage Silo (CN-51)	None
	Adipic Acid Storage Silo (TSS-322)	CN-51
	Loss-in-Weight Feeder Bin Vent Filter (CN-52)	None
	Loss-in-Weight Adipic Acid Feeder (SC-417)	CN-52
	Knockout Tank (150 gal) for Vacuum System (TSS-318)	INC-5
	Separator Tank (15 gal) for Vacuum System (TSS-319)	INC-5

Emission Unit	Description	Emission Control Equipment
Polyurethane Production	Polyurethane Reactor (1650 gal) (K-76)	INC-4
	K-76 Knockout Tank (TS-163)	INC-4
	Pressure Shot Tank for K-76 (TSS-163)	INC-4

Emission Unit	Description	Emission Control Equipment
	Polyurethane Reactor (500 gal) K-98	INC-4
	Pressure Shot Tank for K-98 (TSS-160)	INC-4
	K-98 Knockout Tank(TS-166)	INC-4
	Polyurethane Reactor (3000gal)(K-172)	INC-4
	Atmospheric Shot Tank for K-172 (TSS-130)	None
	Pressure Shot Tank for K-172 (TSS-164)	INC-4
	Process Condenser for K-172 (HX-55)	INC-4
	K-172 Knockout Tank (TS-261)	INC-4
	Wash Solvent Tank (TS-71)	None
	Product Drumming	INC-4
	Vacuum Pump	None
	Polyurethane Reactor(1500 gal) (K-118)	INC-4
	Atmospheric Shot Tank for K-76	None
	Atmospheric Shot Tank for K-98	None
	Condensers for K-76, K-98	INC-4
	Drop/Blend Tank for K-172 (4000 gal) (K-148)	INC-4

Emission Unit	Description	Emission Control Equipment
MT/MS Production	MT Drying Vessel (K-97)	INC-1/TSS-17
	MT Still (STILL#8)	INC-1/TSS-17
	MT Still (STILL#9)	INC-1/TSS-17
	MT Still (STILL#10)	INC-1/TSS-17

Emission Unit	Description	Emission Control Equipment
	Vorlex Reactor (K-87)	INC-1/TSS-17
	Vorlex Reactor (TSS-187)	INC-1/TSS-17
	MS Tank (TSS133)	INC-1/TSS-17
	MS Tank (TSS134)	INC-1/TSS-17
	MT Reactor (K-159)	INC-1/TSS-17
	MT Reactor (K-144)	INC-1/TSS-17
	Reactor (K-61)	INC-1/TSS-17
	Reactor (K-69)	INC-1/TSS-17
	MT Hold Tank (TSS72)	INC-1/TSS-17
	MT Hold Tank (TSS137)	INC-1/TSS-17
	Foreruns Tank (TSS-L-5)	INC-1/TSS-17
	MT Hold Tank(TSS136)	INC-1/TSS-17
	Residue Hold Tank (TSS138)	INC-1/TSS-17
	Residue Drumming from K-97	INC-1/TSS-17
	MS Drumming Station	INC-1/TSS-17
	Vorlex Drumming Station	INC-1/TSS-17
	AD-7 Carbon Unit	INC-1/TSS-17
	AD-8 Carbon Unit	INC-1/TSS-17
	Incinerator(INC-1)	-

Emission Unit	Description	Emission Control Equipment
Monomer for Reaction	Monomer for Reaction Hold Tank	AD-9
	Monomer for Reaction Hold Tank (TSS-55)	AD-9
	Monomer for Reaction Hold Tank (TSS-79)	AD-9
	Monomer for Reaction Hold Tank	AD-9
	Monomer for Reaction Hold Tank (K-14)	AD-9
	Heat Exchanger (HX-48)	AD-9
	Monomer Reactor (K-89)	AD-9

Emission Unit	Description	Emission Control Equipment
	Side Stream Mix Can for K-89(B)	
	Storage Tank	
	Latex or Serfene Reactor	Carbon Adsorber

Emission Unit	Description	Emission Control Equipment
Development Area Building 28	Portable O.T. Tank (TSS-109)	Vent to Atmosphere
	Reactor (300 gal) (K139/HX-149)	AB-26
	Reactor (500 gal) (K149/HX140)	AB-32
	Reactor (1000 gal) K147/HX263)	AD-10
	Reactor (350 gal) K143/HX263)	AD-10
	Loading Liquid Hazardous Material to TSS172	AB-27
	Holding Tank for Raw Material (175 gal) (TSS-172)	AD-10
	Blending/Mixing (1000 gal) (TSS-81)	AB-26
	Reactor (185 gal) (K142/HX189)	AD-10
	Reactor (500 gal) (K-183)	AD-10
	Holding/Drop Tank (100 gal) For K-123 (K-160)	AD-10
	Monomer Tank (375 gal) (K-113)	AD-10
	Monomer Tank (75 gal) (K-93)	AD-10
	Monomer Tank (75 gal) (K-94)	AD-10
	Monomer Tank (75 gal) (K109)	AD-10
	Reactor (100 gal) (K-64)	AD-10
	Reactor (100 gal) (K141/HX74)	AD-10
	Reactor (100 gal) (K140/HX73)	AD-10

Emission Unit	Description	Emission Control Equipment
	Reactor (500 gal) (K112)	AB-27,AD-10
	Side Stream Container (20 gal) (TSS330)	Vent to Atmosphere
	Side Stream Container (20 gal) (TSS331)	Vent to Atmosphere
	Centrifuge-Special Product (CE-7)	AB-26
	Fume Scrubber (AB-32)	AB-26
	Scrubber –Caustic Solution (AB-26)	Vent to Atmosphere Building 132
	Knockout Pot for Mono Vac(100 gal) (TSS-276)	AB-26
	Fume Scrubber – Backup Unit (AB-30)	AB-26
	Carbon Bed (AD-10)	Vent to Atmosphere Building214
	Scrubber (AB-27)	Vent to Atmosphere Building269
	Knockout Pot for Kinney VAC (100 gal) (TSS-288)	AB-27

Emission Unit Building 44E	Description	Emission Control Equipment
	Reactor (150 gal) (K-162)	AB-34
	Process Condenser for K-162 (HX-176)	AB-34
	Reactor (280 gal) (HX-177)	AB-34
	Monomer/Raw Materials Tank (175 gal)(TSS-251)	AB-34

Emission Unit	Description	Emission Control Equipment
	Monomer/Raw Materials Tank (175 gal)(TSS-252)	AB-34
	Shot Tank (20 gal) (TSS-253)	AB-34

Emission Unit	Description	Emission Control Equipment
Building 44W	Scrubber (AB-34	AD-13
	Carbon Beds (AD-13)	Vent to Atmosphere Building 198
	Dust Collector (DC-36)	Vent to Atmosphere Building 214

Emission Unit	Equipment	Emission Control Equipment
Morthane TPU Line I	MDI Blending Tank (TSS-229)	None
	Polyol Blending Tank (K-74)	None
	Belt curing oven Conveyor and Miscellaneous equipment	None
Morthane TPU Line III	MDI Storage/Feed tank (TSS-306)	Closed loop
	Storage/Feed tank (TSS-180)	Scrubber (AB-39)
	Polyester Storage/Feed Tank (TSS-308)	None
	Blender (MI-376)	Filters (CN-53,54)
	Storage Tank (TSS-307)	
	Xylene Feed Tank	
	Extruder (EX-5)	INC-5
Morthane TPU Batch Process	MDI Drop Tank (TSS-370)	Vents to Atmosphere

Emission Unit	Description	Emission Control Equipment
PSA Production	PSA Reactor (1500 gal) (K-118)	INC-4
	Monomer Tank for K-118 (920 gal) (TSS-124)	INC-4
	Batch Can for K-118 (200 gal) (TSS-189)	INC-4

Emission Unit	Description	Emission Control Equipment
	Drop Tank for K-118 (2000 gal) (TSS-122)	INC-4

Emission Unit	Description	Emission Control Equipment
	Knockout Tank for K-118 (TS-165)	INC-4
	Batch Can for K-118 (200 gal) (TSS-196)	INC-4
	Wash Solvent Tank (TS-71B)	None
	Wash Solvent Hold Tank (TSS-305)	INC-4
	Product Drumming	INC-4

Emission Unit	Description	Emission Control Equipment
Liquid Dye Production	K-111 Dye Reactor (500 gal)	None
	K-145 Dye Reactor (500 gal)	None
	K-161 Dye Reactor (1,000 gal)	None
	K-114 Dye Holding Tank (500 gal)	None
	AB-26 Caustic Scrubber	None
	AB-27 Caustic/Water Absorber	None
	AD-10 Carbon Adsorber	None
	AB-32 Acid Scrubber	None

Note: This list does not identifies all process components associated with individual reactor systems, such as heat exchangers, knock out tanks, and vacuum systems.

7.2.3 Applicability Provisions and Applicable Regulations

a. The “affected group of emission units” for purposes of these unit-specific conditions, are the emission units described in section 7.2.1.

b. The affected group of emission units is subject to 35 IAC 218 Subpart RR (Miscellaneous Organic Chemical Manufacturing Processes) which requires that the emission capture and control techniques achieve an overall reduction in uncontrolled VOM emissions of at least 81% from each emission unit, except as addressed by condition 7.2.4.

c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

d. i. Notwithstanding the above requirements in condition 7.2.3(b) and (c), in the event of process or control equipment malfunction or breakdown, the Permittee may continue to operate in excess of the above limits as necessary to prevent injury to persons or severe damage equipment, provided however that continued operation solely for the economic benefit of the Permittee shall not be sufficient reason to continue operation. For this purpose, the Permittee may continue operation of a batch until it can safely shut down the process; or switch to alternative control equipment, if available; discontinue operation of the process unit if the reaction has been stabilized by terminating production in progress; or complete production of a batch if such action is needed. No new batches shall be initiated until the control device returns to proper operation. The Permittee may unload materials from a vessel into drums in the event of control equipment malfunction or breakdown if those materials would otherwise gel or solidify in the vessel.

ii. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of conditions 7.2.9(b) and 7.2.10(b).

e. Each affected emission unit at the source is subject to 35 IAC 212.321(a), which requires that:

i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection I of 35 IAC 212.321 [35 IAC 212.321(a)], that is the allowable emission rates specified in the following equation:

$$E = A(P)^B$$

Where:

P = Process weight rate; and,
E = Allowable emission rate; and,

1. For process weight rates up to 408 MG/hr (450 ton/hr):

	Metric	English
P	Mg/hr	ton/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rates in excess of 408 MG/hr (450 ton/hr):

	Metric	English
P	Mg/hr	ton/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

7.2.4 Non-Applicability of Regulations of Concern

a. i. This permit is issued based on the emission units in the following process areas not being subject to control requirements of 35 IAC 218 Subpart RR, Miscellaneous Organic Chemical Processes, because these emission units meet the exemption of 35 IAC 218.960(d), i.e.,:

No limits under 35 IAC 218 Subpart RR shall apply to emission unit with emission of VOM to the atmosphere less than 0.91 Mg (1.0 tons) per calendar year if the total emissions from such emission units not complying with 35 IAC 218.966 of Subpart RR does not exceed 4.5 Mg (5.0 ton) per calendar year. [35 IAC 218.960(d)]

Morthane TPU Line III
TPU Line I
TPU Batch Process
Morez Solution in Building 4
Morez Solution in Building 27
Development Area CE-7
Dyes
Waterbase in Latex/Serfene Isopropyl Alcohol

Building 28
K-(64, 112, 139, 140, 141, 142, 143, 147, 149, and 183)

ii. If the actual VOM emissions of an emission unit are 1.0 ton or more per year, or the total actual emissions of all such emission unit being excluded from applicability of 35 IAC 218, Subpart RR, 5.0 tons or more per year, the Permittee shall promptly notify the Illinois EPA in accordance with Condition 7.2.12, identifying the emission units that are affected and providing the plan for future compliance with 35 IAC 218, Subpart RR.

b. i. This permit is issued based on the affected group of emission units not being subject to the following federal rules as the affected group of emission units do not manufacture the products addressed by these rules:

- 40 CFR 60, Subpart VV, III, NNN, and RRR –synthetic organic chemicals listed at 40 CFR 60.489, 60.617, 60.667, or 60.707.
- 40 CFR 60, Subpart DDD – polypropylene, polyethylene, polystyrene, and poly(ethylene terephthalate) as defined at 40 CFR 60.561.
- 40 CFR 63, Subpart U – elastomer products as defined at 40 CFR 63.480(b).
- 40 CFR 63, Subpart V - ethylene dichloride, vinyl chloride or polymers containing polymerized vinyl chloride.
- 40 CFR 63, Subpart W – basic liquid epoxy resin or wet strength resins using epichlorihydrin as the primary reactant.
- 40 CFR 63, Subpart JJJ – primary production of thermoplastic products that are greater than 80% styrene or alpha-methyl styrene.
- 40 CFR 63, Subpart MMM – pesticides, herbicides, or fumigants with hazardous active ingredients covered by the MACT standard.

- 40 CFR 63, Subpart OOO – primary production of amino or phenolic based resins.

ii. This permit is issued based on the affected group of emission units not being subject to the following federal rules because affected group of emission units do not manufacture or use the chemicals addressed by these rules:

- 40 CFR 63, Subpart F, G,H, and I – manufacture of any synthetic organic chemicals listed in 40 CFR 63.106 Table 1 and manufacture or use of any synthetic organic chemicals listed in 40 CFR 63.106 Table 2.

iii. Prior to using the affected group of emission units so that any of the above rules is applicable, the Permittee shall:

- Notify Illinois EPA;
- Fulfill relevant requirement of the applicable rule for a newly affected unit;
- Obtain a revision to this CAAPP permit; and
- Obtain a Construction Permit(s), as necessary for any modification to the affected group of emission units.

7.2.5 Operational and Production Limits and Work Practices

The adsorbers AD-10 and AD-13 will be operated to comply with Condition 7.2.3(b) or the 8 hour average concentration at the inlet will be less than 30 ppm. Compliance with Condition 7.2.3(b) for AD-10 or AD-3 is determined by calculating the demonstrated control efficiency over any consecutive 24 hour period (i.e., three discrete sequential 8 hour intervals) based on the following equation:

$$CE_{avg} = \frac{\sum_i Cin(i) - \sum_i Cout(i)}{\sum_i Cin(i)}$$

Where:

Ce_{avg} = Average control efficiency for 24 hour period

Cin(i) = Average inlet concentration for the ith 8 hour interval

Cout(i) = Average outlet (exhaust) concentration for the with 8 hour interval

$_I$ = Subscript denoting an individual 8 hour interval (Note: 8 hour intervals during which Cin(i) < 30 ppm are not included in the calculation of CE_{avg})

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, certain affected emission units are subject to the following emission limitations:

Emission Units(s)	VOM Limit (TPY)	Construction Permit
Latex K-154	2.48	89010053
Morez Solution Building 27	0.79	89080049
Grafted Resins	3.27	89080048
Development Area Building 44	1.77	89100052
Grafted Resin Washing	0.83	91120089
K-172 Replaced K-117	4.52	93010052
Morez Line I Morez Line II Morez Line III	2.0 4.8 4.8	93010054
Morthane K-173	0.5	93090068
K-174 with TSS-339, TSS-340, and Monomer Blend Tank K-176	5.07	94120033
Reactors K-157 with Drop Tank K-179	2.59	96090032
Morthane TPU Line III Process	1.17	97070040
K-178 Replaced K-121 with Drop Tank K-179	4.32	98100007 and 96090032
Intermediate Storage Tanks TSS-395 and TSS-396	0.12	98110006
Total	39.11	

* Permitted increase over any five consecutive years is less than 25 tpy.

The above limitations contain revisions to previously issued permit. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of these permits, consistent with the information provided in the CAAPP

application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and modification addressed in these permits does not constitute a major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. [T1R]

7.2.7 Testing Requirements

Upon reasonable request by the Illinois EPA, pursuant to section 39.5(7)(d) of the Act, the Permittee shall test for VOM emissions or efficiency.

7.2.8 Monitoring Requirements

a. For oxidizers, e.g., INC-1, INC-4, and INC-5, the Permittee will continuously monitor combustion temperature, pursuant to 35 IAC218.105. The Permittee will operate INC-1 to maintain the exhaust at or above 1200°F. The Permittee will operate INC-4 and INC-5 to maintain the combustion temperature at or above 1600°F. Compliance with the temperature thresholds will be determined on rolling 15 minutes averages.

b. For carbon adsorber AD-9, the Permittee will comply with 35 IAC 218.105(d)(2)(A)(iii) by continuously collecting and recording the concentration of VOM in the bed exhaust of the adsorber. For this purpose, it is acceptable to monitor for total organic carbon or vinylidene chloride, which is the principle component of the VOM.

c. i. For carbon adsorbers AD-10 and AD-13, the Permittee will comply with 218.105(d)(2)(A)(iii) by monitoring the VOM concentration at least once every 30 minutes, and for each discrete, sequential 8 hour interval recording the average VOM concentration in the bed exhausts of the adsorbers.

ii. The Permittee will also monitor the inlet VOM concentration at least once every 30 minutes, and for each discrete, sequential 8-hour interval record the average VOM concentration at the inlets to carbon adsorbers AD-10 and AD-13.

d. For adsorbers AD-9, AD-10, and AD-13 during periods of monitoring equipment malfunction, the Permittee shall:

i. Records the duration of all monitoring equipment malfunctions and records the hours the associated source is operated without monitoring device.

ii. Provides written notice to the Agency within 10 days following the conclusion of any 72 hour period during which an adsorber is operated and the associated monitoring equipment is not operational. This notice must provide the duration of the malfunction, a description of the repairs made to the equipment, and the total to date of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational.

iii. Operate the adsorber using timed sequence as the basis for periodic regeneration or bed replacement of the adsorber.

c. The Permittee will maintain the following information for control devices for a period of three years pursuant to 35 IAC 218.991(a)(2):

i. Control device monitoring data;

ii. A log of operating time for the capture system, control device, monitoring equipment, and the associated source;

iii. A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

7.2.9 Recordkeeping Requirements

a. In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected emission units to demonstrate compliance with Conditions 5.5.1, 7.2.3, and 7.2.6 pursuant to Section 39.5(7)(b) of the Act:

i. Type of product;

ii. Monthly and annual production, lb; and

iii. The monthly and annual aggregate VOM emissions from the affected emission units based on the throughput and emission factors, with supporting calculations except for Morez Lines I, II, and III which will be based on a mass balance before control, with supporting calculations using appropriate control efficiencies.

b. The Permittee shall maintain records, pursuant to 35 IAC 201.263, during malfunctions and breakdown of the control features, which as a minimum, shall include:

i. Date and duration of malfunction or breakdown;

ii. A detailed explanation of the malfunction or breakdown;

iii. An explanation why the damaged feature(s) could not be immediately repaired or the control equipment removed from service without risk of injury to personnel or severe damage to equipment;

iv. The measures used to reduce the quantity of emissions and the duration of the event;

v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and

vi. The amount of release above typical emissions during malfunction/breakdown.

7.2.10 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected emission units with the permit requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

Emissions of VOM from the affected emission units in excess of the limits specified in Condition 7.2.3 or 7.2.6 within 30 days of such an occurrence.

b. The Permittee shall provide the following notification and reports to the Illinois EPA, Compliance Section and Regional Field Office, pursuant to 35 IAC 201.263, concerning continued

operation of a control equipment subject to Condition 7.2.3b during malfunction or breakdown.

i. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) days, upon the occurrence of noncompliance due to malfunction or breakdown.

ii. Upon achievement of compliance, the Permittee shall give a written follow-up notice to the Illinois EPA, Compliance Section and Regional Field Office, providing a detailed explanation of the event, an explanation why continued operation of the control equipment was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or when the control equipment was taken out of service.

iii. If compliance is not achieved within 5 working days of the occurrence, the Permittee shall submit interim status reports to the Illinois EPA, Compliance Section and Regional Field Office, within 5 days of the occurrence and every 14 days thereafter, until compliance is achieved. These interim reports shall provide a brief explanation of the nature of the malfunction or breakdown, corrective actions accomplished to date, actions anticipated to occur with schedule, and the expected date on which repairs will be complete or the control equipment will be taken out of service.

c. Upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 IAC 218 Subpart RR, Miscellaneous Organic Chemical Manufacturing Processes, shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that this emission unit is exempt from those requirements [35 IAC 218.990].

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

a. The process emission units detailed in section 7.2.1 and 7.2.2 consist of batch, semi-continuous, and continuous operations, utilizing the equipment listed in section 7.2.2 and additional insignificant equipment in various configurations and sequences, involving variable batch times and batch cycles. In

order to produce the products described in section 7.2.1 for each process emission unit, the Permittee uses a variety of chemical components and raw materials, and produces various chemical intermediates. Nothing in this permit is intended to restrict the Permittee's operations involving these processes to the extent that the Permittee satisfies all the applicable rules and all the applicable limitations specified in this permit. Nothing herein is intended to authorize construction of a new source or a physical modification to the existing sources included within the individual process emission units without a construction permit, except to the extent otherwise authorized by the applicable standards.

b. For Morez Lines II and III, the process emission units are permitted to operate either with the primary control device (INC-4 for Morez II and INC-5 for Morez III) or with a secondary control equipment (HX154/HX220 for Morez II and HX182 for Morez III).

c. For polyurethane Production, the normal mode of operation will be with emissions controlled by INC-4. The alternative operating scenario will the production of non-volatile materials when the control device is not available. For purposes of this operating scenario, non-volatile material is considered organic material with a vapor pressure less than 1.0mm Hg at 70°F (or otherwise excluded from the definition of a VOC at 35 IAC 211.7150). A log recording the time when the alternative operating scenario is used.

d. Reactor K-118, included in the PSA Production process emission unit, may also produce polyurethane adhesives.

e. For Monomer for Reaction process emission unit, the Permittee may utilize Serfene Process or Latex process emission unit reactors. This provision is based on no increase in annual charging gallons of monomer for reaction to all reactors.

f. For Morthane TPU Line III, the normal mode of operation will be with emissions controlled by INC-5. The alternative operating scenario will the production of non-volatile materials when the control device is not available. For purposes of this operating scenario, non-volatile material is considered organic material with a vapor pressure less than 1.0 mm Hg at 70°F (or otherwise excluded from the definition of a VOC at 35 IAC 211.7150). A log recording the time when the alternative operating scenario is used.

7.2.12 Compliance Procedures

Compliance with all emission limits except those of Morez Lines I, II, and III shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below. For Morez Lines I, II, and III, compliance with emission limits will be based on the recordkeeping requirements in condition 7.2.9 and a mass balance before control.

To demonstrate compliance with 35 IAC 218.967, the regenerative carbon system (AD-9) shall be operated in a manner that is consistent with that during compliance testing, including appropriate regeneration of the carbon beds.

To determine compliance with Conditions 5.5.1, 7.2.3, and 7.2.6, VOM emissions from the affected emission unit shall be calculated based on the following emission factors except for Morez Lines I, II, and III, which will be by mass balance before control. (These factors are conservative estimates of actual emissions for the range of batches produced in an emission unit, so that use of these factors may overstate actual emissions of the atmosphere)

Group No. 2	Before Control Emission Factors lb VOM/1000 lb Product	After Control Emission Factors lb VOM/1000 lb Product	Maximum Production Rate mm* lb/yr
Morez Solution, Building 4	0.00000939	0.00000939	30.66
Morez Solution, Building 27	0.130	0.130	12.26
Serfene Process, including K-174 with K-176	5.30	0.986	39.82
Adcote Polyester, including K-178 and K-157 with Drop Tanks	36.99	0.779	28.84
Grafted Resins/Grafted Washing			
Grafted Resin Alone	14.68	0.830	7.88
Washing Alone	60.34	2.019	0.82
Liquid Dye Production	50.00	6.750	0.54
Latex	1.04	0.193	37.99
Latex K154 System	0.67	0.124	40.00
Morthane Polyester, including K-173	6.35	0.071	28.05
Polyuerethane including K-172	4.89	0.319	39.86
MT/MS Production	7.06	0.141	15.00
Monomer for Reaction	1.31	0.243	18.26
Development Area Building 28	6.77	0.998	7.12
Development Area Building 44	6.81	1.066	0.88
Development Area Centrifuge CE-7	0.013	0.013	0.21

Group No. 2	Before Control Emission Factors lb VOM/1000 lb Product	After Control Emission Factors lb VOM/1000 lb Product	Maximum Production Rate mm* lb/yr
Morthane TPU Line I	0.0089	0.0089	15.77
Morthane TPU Line III	2.543	0.066	19.71
Morthane TPU Batch Process	0.000000489	0.000000489	24.51
PSA Production	19.80	1.481	4.69
Intermediate Storage Tanks TSS-395 and TSS-396	0.0111	0.0111	21.6

* For informational purposes only.

These are the emission factors for uncontrolled and controlled VOM emissions and are based on the stack tests and/or engineering estimate.

VOM emission (lb) = (production, lb/1000) x (emission factors, lb VOM/1000 lb product)

VOM emissions (lb) = VOM emissions for Morthane TPU Line III (lb) [(production, lb/1000) x (emission factors, lb VOM/1000 lb product)] + Xylene emissions Xylene emissions are determined on a mass balance basis.

7.3 Group 3 Polymer Wash Water Reduction Unit Solvent Recovery System

7.3.1 Description

The Permittee operates various units as follows, to treat certain byproducts from its manufacturing operations.

Polymer Wash Water Reduction Unit:

The polymer wash water reduction system consists of a two stage evaporator system and associated tanks/equipment. It is used to concentrate a solids wash water stream to a paste for disposal. The distillate is processed by biological treatment.

Solvent Recovery System:

The emission unit processes a solvent-laden feed stream to remove various impurities and prepare the feed for reuse or disposal.

7.3.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Polymer Wash Water Reduction Unit	Waste Water from APV Unit (TSS-24)	None
	Feed Stock Tank (TFG-23)	None
	Feed Holding Tank (TFG-24)	None
	Ph Adjustment Tank (TFG-22)	None
	Storage Tank Before EV-7 (TS-239)	None
	Day Tank For EV-7 (TS-209)	None
	Luwa, Evaporate Water (EV-7)	Carbon Adsorber (AD-9)
	Sludge Extractor Pump (P-3)	None
	Concentrator (APV Unit)	None
	Vapor Body Dimister (TSS-210)	None
	Stripper (PC-13)	Carbon Adsorber (AD-9)
	Shuttel Slide Bed Belt Conveyor (M-3, M-4)	None
	Heat Exchanger (HX-104, HX-105)	None
	Flush Tank (HE-123)	None
	Snubber (TSS-344)	None
	Blower (Bl-187)	None
	Drum Collector From F-196	None
	Filter Screen for APV Unit (F-196)	None

Emission Unit	Description	Emission Control Equipment
Solvent Recovery System	1,000 Gal Feed Tank (TSS-309)	None
	500 Gal Bottoms Receiver (TSS-310)	None
	500 Gal Distillate Receiver (TSS-311, 312)	None
	210 Gal Feed Boiler (SI-25)	None
	60 Gal Column (SI-26)	None
	Sub Cooler (HX-231)	None
	Condenser (HX-232)	None
	Vacuum System (P-1191)	Ceilcote Packed Scrubber (AB-34), Carbon Adsorber (AD-13)

Note: This list does not identifies all process components associated with individual reactor systems, such as heat exchangers, knock out tanks, and vacuum pumps.

7.3.3 Applicability Provisions and Applicable Regulations

a. The affected polymer wash water reduction system and the solvent recovery system for purposes of these unit-specific conditions are described in Section 7.3.1.

b. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

c. The affected polymer wash water reduction system is subject to 35 IAC 218 Subpart TT (Other Emission Units) which requires that emission capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 81% from each emission unit.

d. i. Notwithstanding the above requirements in condition 7.2.3(b) and (c), in the event of process or control equipment malfunction or breakdown, the Permittee may continue to

operate in excess of the above limits as necessary to prevent injury to persons or severe damage equipment, provided however that continued operation solely for the economic benefit of the Permittee shall not be sufficient reason to continue operation. For this purpose, the Permittee may continue operation of a batch until it can safely shut down the process; or switch to alternative control equipment, if available; discontinue operation of the process unit if the reaction has been stabilized by terminating production in progress; or complete production of a batch if such action is needed. No new batches shall be initiated until the control device returns to proper operation. The Permittee may unload materials from a vessel into drums in the event of control equipment malfunction or breakdown if those materials would otherwise gel or solidify in the vessel.

ii. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of conditions 7.2.9(b) and 7.2.10(b).

e. The affected solvent recovery system is subject to 35 IAC 212.321(a), which requires that:

i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)], that is,

The allowable emission rates specified in the following equation:

$$E = A(P)^B$$

Where:

P = Process weight rate; and,
E = Allowable emission rate; and,

1. For process weight rates up to 408 MG/hr (450 ton/hr):

	Metric	English
P	Mg/hr	ton/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rates in excess of 408 MG/hr (450 ton/hr):

	Metric	English
P	Mg/hr	ton/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

7.3.4 Non-Applicability of Regulations of Concern

This permit is issued based on the affected solvent recovery system unit not being subject to 35 IAC 218 Subpart TT, Other Emission Units, because the affected emission unit meets the exemption of 35 IAC 218.980(d). In particular, the affected solvent recovery system unit has:

Emissions of VOM to the atmosphere that are less than 2.3 Mg (2.5 tons) per calendar year, and the total emissions from such emission units not complying with 35 IAC 218.986 of Subpart TT do not exceed 4.5 Mg (5.0 ton) per calendar year. [35 IAC 218.980(d)]

Historical Actual Emissions

Solvent Recovery System (2.45 tpy)

7.3.5 Operational and Production Limits and Work Practices

a. The carbon adsorber system (AD-9) shall be operated in a manner that is consistent with operation during compliance testing, including appropriate regeneration of the carbon beds, To demonstrate compliance with 35 IAC 218.986(a).

b. Notwithstanding Condition 7.3.3(c), the Permittee may operate the polymer waterwash evaporator CEV-7 without a control device when processing wastewater which has already been stripped to remove VOM, e.g., wastewater that has been processed by the concentrator (APV). This reflects the minimal emission of the evaporator when processing stripped wastewater, such that use of control is not required pursuant to 35 IAC 218.980(d). [See also Condition 7.3.4].

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected recovery system unit is subject to the following:

Emissions of VOM from the affected solvent recovery system shall not exceed 2.5 tons per year.

The above limitation also established in permit 93080061 to address applicability of 35 IAC Part 203. This limit ensures that the affected solvent recovery system is not subject to the control requirements of 35 IAC 218 986(a) Subpart TT, [T1].

7.3.7 Testing Requirements

Upon reasonable request by the Illinois EPA, pursuant to section 39.5(7)(d) of the Act, the Permittee shall test for VOM emissions or efficiency.

7.3.8 Monitoring Requirements

a. For carbon adsorber AD-9 and AD-13, the Permittee will comply with 35 IAC 218.105(d)(2)(A)(iii) by continuously collecting and recording the concentration of VOM in the bed exhaust of the adsorber AD-9. For this purpose, it is acceptable to monitor for total organic carbon or vinylidene chloride, which is the principle component of the VOM.

b. i. For carbon adsorber AD-13, the Permittee will comply with 218.105(d)(2)(A)(iii) by monitoring the VOM concentration at least once every 30 minutes, and for each discrete, sequential 8 hour interval recording the average VOM concentration in the bed exhausts of the absorbers.

ii. The Permittee will also monitor the inlet VOM concentration at least once every 30 minutes, and for each discrete, sequential 8 hour interval record the average VOM concentration at the inlet to carbon adsorber AD-13.

c. For adsorber AD-9 and AD-13, during periods of monitoring equipment malfunction, the Permittee shall:

i. Record the duration of all monitoring equipment malfunctions and records the hours

the associated source is operated without the monitoring device.

ii. Provide written notice to the Illinois EPA within 10 days following the conclusion of any 72 hour period during which an adsorber is operated and the associated monitoring equipment is not operational. This notice must provide the duration of the malfunction, a description of the repairs made to the equipment, and the total to date of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational.

iii. Operate the adsorber using timed sequence as the basis for periodic regeneration or bed replacement of the adsorber.

d. The Permittee will maintain the following information for a period of three years pursuant to IAC 218.991(a)(2):

i. Control device monitoring data;

ii. A log of operating time for the capture system, control device, monitoring equipment, and the associated source;

iii. A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

7.3.9 Recordkeeping Requirements

a. In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected polymer wash water reduction unit and the affected recovery system unit to demonstrate compliance with Conditions 5.5.1, 7.3.3, and 7.3.6 pursuant to Section 39.5(7)(b) of the Act:

i. The aggregate monthly and annual VOM emissions from the affected polymer wash water reduction system based on the wash water processed, with supporting calculations.

ii. Type of solvents being recovered;

iii. Amount of solvents charged to the affected solvent recovery system, lb/day and lb/yr;

iv. Amount of solvents recovered (VOM collected i.e., not emitted, material recovered on site and/or sent off site for disposal or reclamation), gal/day and gal/year; and

v. The aggregate monthly and annual VOM emissions from the affected solvent recovery system based on the solvent charged and emission factors, with supporting calculations.

b. The Permittee shall maintain records, pursuant to 35 IAC 201.263, during malfunctions and breakdown of the control features, which as a minimum, shall include:

i. Date and duration of malfunction or breakdown;

ii. A detailed explanation of the malfunction or breakdown;

iii. An explanation why the damaged feature(s) could not be immediately repaired or the control equipment removed from service without risk of injury to personnel or severe damage to equipment;

iv. The measures used to reduce the quantity of emissions and the duration of the event;

v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and

vi. The amount of release above typical emissions during malfunction/breakdown.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected Polymer wash water reduction unit and the affected solvent recovery system with the permit requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

a. Upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 IAC 218 Subpart TT, Other Emission Units, shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that this emission unit is exempt from those requirements [35 IAC 218.990].

b. Emissions of VOM from the affected solvent recovery system and from the polymer wash water reduction unit in excess of the limits specified in Condition 7.3.3 or 7.3.6 within 30 days of such an occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

To determine compliance with Conditions 5.5.1, 7.3.3, and 7.3.6, VOM emissions from the affected polymer wash water reduction system shall be calculated based on the following:

Group No 3	Before Control Emission Factors lb VOM/1000 lb Processed	After Control Emission Factors lb VOM/1000 lb Processed	Max Process Rate* MM lb/yr
Polymer Wash Water Reduction	0.22	0.040	59.16
Solvent Recovery System	1.556	1.556	3.15

* For informational purposes only

These are the emission factors for uncontrolled and controlled VOM emissions and are based on the stack tests and/or engineering estimate.

VOM emission (lb) = (production, lb/1000) x (emission factors, lb VOM/1000 lb processed)

7.4 Group 4 Finished Product Storage Tanks

7.4.1 Description

Finished product (water based polymers) storage in aboveground storage tanks. MDI Storage (TSS-271)

7.4.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Finished Product Storage Tanks	16,300 Gallon Finished Product Storage Tank (TSS-332, 333, 334, 335, 336, and 337)	None
	16,000 Gallon Finished Product Storage Tank (TSS-217)	None
	12,000 Gallon Finished Product Storage Tank (TSS-218)	None
	12,000 Gallon MDI Storage Tank (TSS-271)	Vapor Return Line

7.4.3 Applicability Provisions and Applicable Regulations

An "affected tank" for the purpose of these unit-specific condition is a storage tank that is listed in Condition 7.4.2.

7.4.4 Non-Applicability of Regulations of Concern

a. Except as provided in Condition 7.4.9(a) (see also 40 CFR 60.116b) storage vessels with design capacity less than 75 m^3 (20,000 gal) are exempt from the General Provisions of the NSPS and from the provisions of 40 CFR 60 Subpart Kb [40 CFR 60.110b(b)].

b. The affected tank are not subject to the limitations of 35 IAC 218.120, Control Requirements for Storage Containers of VOL, pursuant to 35 IAC 218.119, because the affected tank has a capacity less than 151 m^3 (40,000 gal).

c. The affected tank are not subject to the requirements of 35 IAC 218.122, Loading Operations, because pursuant to 35 IAC 218.122(c), if no odor nuisance exists the limitations of this 35 IAC 218.122 shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).

d. The affected tank is not subject to 35 IAC 218.141 because separation operations do not receive effluent

water containing mare than 200 gallons per day of organic material.

e. The affected tank is not subject to 40 CFR 60, Subpart K and Ka because the tanks do not have a capacity 40,000 gallons or more.

f. The affected tank is not subject to 35 IAC Sections 218.120,210,121, and 218.129 through 218.129 because the tanks do not have a capacity of 40,000 gallons or more.

7.4.5 Operational and Production Limits and Work Practices

The affected tanks shall have a submerged fill pipe, utilize a vapor balance system during filling and be vented to a VOM control device, be a pressure tank, or be used only for the storage of liquid with a vapor pressure less than 2.5 psia.

7.4.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.4.7 Testing Requirements

None

7.4.8 Monitoring Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected tank to demonstrate compliance with Conditions 5.5.1 and 7.4.3 pursuant to Section 39.5(7)(b) of the Act:

a. Readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source [40 CFR 60.116b(a), and (b), and [35 IAC 218.129(f)];

b. The throughput of the affected tank, gal/mo and gal/yr; and

c. The annual VOM emissions from the affected tank based on the material stored, the tank throughput, and the

applicable emission factors and formulas with supporting calculations.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected tank with the permit requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

The storage of any VOL or VPL other than the material specified in Condition 7.4.5 within 30 days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps to be taken to avoid future non-compliance.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission factors and formulas listed below:

For the purpose of estimating VOM emissions from each affected tank, the current version of the TANKS program is acceptable.

7.5 Group 5 Tank Farm (TS-72, TS-148, TLI-4, TLI-5, TSS-200)

7.5.1 Description

The tank farm is used to store the liquid raw materials that are used as feedstock within the source. Working and breathing losses are associated with the components of the emission unit.

7.5.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Tank Farm	TS-72 (10,500 Gal)	Conservation Vent Closed Loop Loading (90% Efficiency)
	TS-148 (17,400 Gal)	Pressurized Tank (100% Efficiency)
	TLI-4 (12,500 Gal) TLI-5 (26,000 Gal)	Pressurized Tank Carbon Adsorber (AD-9) (81.4% Efficiency)
	TSS-200 (8,000 Gal)	Conservation Vent Closed Loop Loading (90% Efficiency)
	TSS-112	Vents to Conservation Vent

7.5.3 Applicability Provisions and Applicable Regulations

An "affected farm tank" for the purpose of these unit-specific condition is a storage tanks that are listed in Condition 7.5.2.

7.5.4 Non-Applicability of Regulations of Concern

a. Except as provided in Condition 7.5.9(a) (see also 40 CFR 60.116b) storage vessels with design capacity less than 75 m^3 (20,000 gal) are exempt from the General Provisions of the NSPS and from the provisions of 40 CFR 60 Subpart Kb [40 CFR 60.110b(b)].

b. The affected tank are not subject to the limitations of 35 IAC 218.120, Control Requirements for Storage Containers of VOL, pursuant to 35 IAC 218.119, because the affected tank has a capacity less than 151 m^3 (40,000 gal).

c. The affected tank are not subject to the requirements of 35 IAC 218.122, Loading Operations, because pursuant to 35 IAC 218.122(c), if no odor nuisance exists the limitations of this 35 IAC 218.122 shall only apply to the loading of VOL with a vapor

pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).

d. Affected tank are not subject to 40 CFR 60, Subpart K and Ka because the tanks do not have a capacity of 40,000 gallons or more.

e. The affected tank is not subject to 35 IAC Sections 218.120,210,121, and 218.129 through 218.129 because the tanks do not have a capacity of 40,000 gallons or more.

7.5.5 Operational and Production Limits and Work Practices

The affected tanks shall have a submerged fill pipe, utilize a vapor balance system during filling and be vented to a VOM control device, be a pressure tank, or be used only for the storage of liquid with a vapor pressure less than 2.5 psia.

7.5.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.5.7 Testing Requirements

None

7.5.8 Monitoring Requirements

Monitoring and recordkeeping requirements for carbon adsorber AD-9 are established in Condition 7.3.8 and 7.3.9.

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected tank to demonstrate compliance with Conditions 5.5.1 and 7.5.3 pursuant to Section 39.5(7)(b) of the Act:

a. Readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source [40 CFR 60.116b(a), and (b), and [35 IAC 218.129(f)];

b. The throughput of the affected tank, gal/mo and gal/yr; and

c. The annual VOM emissions from the affected tank based on the material stored, the tank throughput, and the applicable emission factors and formulas with supporting calculations.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected tank with the permit requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

The storage of any VOL or VPL other than the material specified in Condition 7.5.5 within 30 days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps to be taken to avoid future non-compliance.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:

To demonstrate compliance with 35 IAC 218.967, the regenerative carbon system (AD-9) shall be operated in a manner that is consistent with that during compliance testing, including appropriate regeneration of the carbon beds.

For the purpose of estimating VOM emissions from each affected tank, the current version of the TANKS program is acceptable.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after August 9, 2000 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms so long as the changes do not violate applicable requirements or contravene federally enforceable permit terms or conditions that are monitoring (including tests methods), recordkeeping, reporting, or compliance certification requirements without applying for or

obtaining an amendment to this permit, provided that the changes do not constitute a modification under Title I of the CAA, emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change and the Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change [Section 39.5(12)(a) of the Act]. This notice shall:

a. Describe the physical or operational change;

b. Identify the schedule for implementing the physical or operational change;

c. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;

d. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and

e. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

Monitoring Period	Report Due Date
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

a. The name and identification of the affected unit(s);

b. The person(s) who will be performing sampling and analysis and their experience with similar tests;

c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;

d. The specific determination of emissions and operation, which are intended to be made, including sampling and monitoring locations;

e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;

f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

a. The name and identification of the affected unit(s);

b. The date and time of the sampling or measurements;

c. The date any analyses were performed;

d. The name of the company that performed the tests and/or analyses;

e. The test and analytical methodologies used;

f. The results of the tests including raw data, and/or analyses including sample calculations;

g. The operating conditions at the time of the sampling or measurements; and

h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency (MC 40)
Bureau of Air
Compliance Section
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
9911 West Harrison
Des Plaines, Illinois 60016

iii. Illinois EPA - Air Permit Section (MC 11)

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and

d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated there under.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois, 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control

equipment), practices, or operations regulated or required under this permit;

d. Sample or monitor any substances or parameters at any location:

i. At reasonable times, for the purposes of assuring permit compliance; or

ii. As otherwise authorized by the CAA, or the Act.

e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and

f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any

loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].

b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit compliance certifications annually or more frequently as specified in the applicable requirement or by permit condition.

a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.

b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.

c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document, (including reports) required to be submitted by this permit, shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:

i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;

ii. The permitted source was at the time being properly operated;

iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.

b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;

b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;

c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and

d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(l), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 - Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

KKD:psj

10.2 Attachment 2 – Preliminary Baseline Emissions Summary

Seasonal VOM emissions from excluded units, in tons/season (TPS):

	Proposed	Illinois EPA Determination	Notes
Boiler No. 6	0.3210	0.3210	
Boiler No. 7	0.3520	0.3520	
Oil Heater	0.0221	0.0221	
Inc-4	0.0335	0.0000	1
Inc-5	0.0292	0.0000	1
Inc-1	0.0063	0.0000	1
Total:	0.7641	0.6951	

Seasonal VOM emissions from units subject to further reduction, in TPS:

	Proposed	Illinois EPA Determination	Notes
Adcote Polyester	9.690	11.2000	2
Adhesive Resins	0.7990	0.7990	
Adhesive Resins Washing	0.4330	0.4330	
Dye Production	0.4010	0.4010	
Solvent Recovery	0.0141	0.0141	
Latex	0.8430	0.8430	
Latex K154	0.6570	0.6570	
Morez Line II	2.7600	5.5100	2
Morez Line III	4.8000	10.4000	2
Morez Sol. Bld-4	0.00002	0.00002	
Morez Sol. Bld-27	0.1240	0.1240	
Morthane Polyester	2.200	2.8600	2
Morthane TPU-I	0.0140	0.0140	
Morthane TPU-III	0.0627	0.0627	
Morthane TPU-Batch	0.0000	1.0400	2
Polymer Wash Reduction	0.1471	0.1470	
Polyurethane Production	1.6400	4.9500	2
PSA Production	1.3900	1.3900	
Primer Production	0.0766	0.0766	
MT/MS Production	0.0250	0.0250	
Prepolymer Sealant	0.1440	0.1440	
Serfene Process	4.3200	4.3200	
Tank Farm	0.0594	0.0594	
Finished Storage Tanks	0.0445	0.0445	
TSS271	0.0002	0.0002	
Monomer for Reaction	0.3940	0.3940	
Development Area-28	0.3610	0.3610	
Development Area-44	0.0181	0.0181	
CE-7	0.00001	0.00001	
Fugitive	5.5000	5.5000	
Inc-4	0.0000	0.0335	1
Inc-5	0.0000	0.0292	1
Inc-1	0.0000	0.0063	1
Total:	36.9177	51.85673	

Notes: 1. Not excluded from further reduction pursuant to 35 IAC 205.

2. Based on the ERMS rule's allowance to revise baseline emissions. These emissions cannot be altered after issuance of the Title V permit.

The source shall maintain records of actual seasonal VOM emissions for all emission units not considered insignificant activities in accordance with the recordkeeping and compliance procedures identified in the CAAPP permit starting with the 1998 seasonal allotment period of May 1 through September 30. The source shall submit the seasonal emissions information, as a component of the Annual Emissions Report by November 30 of each year, pursuant to 35 IAC 205.300.

TOTAL SOURCE ALLOTMENT = 0.6951 + (0.88 x 51.85673) = 46.3290 TPS

or 464 ATU

1 ATU equals 200 lbs of VOM [35 IAC 205.130], or using standard conversion rate of 2000 lbs per ton, 10 ATU's equals 1 ton.

KKD:psj